

CLAIMS

1. Method for determining the topology of modules in a modular analytical system comprising the steps
 - a) contacting several modules which store data in a memory with a central unit, where at least two modules are connected in series,
 - b) transmitting the stored data of the modules that are directly or indirectly contacted with the central unit to the central unit,
 - c) interrupting a contact of a module to the central unit,
 - d) again transmitting the data of the modules to the central unit,
 - e) restoring the interrupted contact,
 - f) comparing the data that were transmitted before the contact was interrupted with the data that were transmitted after interruption of the contact and determining the topology of the modular analytical system on the basis of the comparison,
wherein the method steps c to e are repeated with at least one other module until sufficient information is available from the comparison to calculate the topology.
2. Method as claimed in claim 1,
in which the data are stored in a permanent memory.

3. Method as claimed in claim 1,
in which the contacting between several modules and the central unit has a star-shaped topology and the central unit can discriminate between the arms of the star by specifically interrupting the contacts to the individual arms.
4. Method as claimed in claim 1,
in which the contacting between a module and the central unit has a linear topology.
5. Method as claimed in claim 1,
in which the contact between a module and the central unit is interrupted or restored by interrupting or restoring a communication line.
6. Method as claimed in claim 1,
in which the contact between a module and the central unit is interrupted or restored by interrupting or restoring the power supply.
7. Method as claimed in 1,
in which the topology of the analytical system is displayed graphically on a screen.
8. Method as claimed in claim 7,
in which operating instructions are communicated to the user which on the screen are graphically allocated to a module.

9. Modular analytical system comprising
 - a central unit which is contacted with several modules, where at least two of the modules are connected in series and the modules each comprise a memory to store data,
 - a switch which can be controlled by a computer unit in such a manner that the contact of a module to the central unit can be interrupted and restored again,
 - the computer unit comprising,
 - a control unit to control the switch,
 - a memory to register the data of the modules and
 - a computing unit to calculate the topology of the analytical system on the basis of a comparison of data that were registered before interrupting a contact between the central unit and a module with data that were registered after interruption of the contact.
10. Modular analytical system as claimed in claim 9,
in which a CAN-bus is used.
11. Modular analytical system as claimed in claim 9,
in which a TCP/IP is used as the protocol.
12. Modular analytical system as claimed in claim 9,
in which the data comprise a type name to identify a module.

13. Modular analytical system as claimed in claim 9,
in which the contact between a module and the central unit is via a line.
14. Modular analytical system as claimed in claim 13,
in which the modules are supplied with power from the central unit via a
line.
15. Modular analytical system as claimed in claim 13,
in which the communication between a module and the central unit is via a
line.
16. Analytical system as claimed in claim 9,
which is suitable for carrying out the method as claimed in one of the claims
1-8.